



PATENT
12480-000175/US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.: 10/574,470

Filing Date: March 31, 2006

Applicant: Masaru TAKAGI et al.

Group Art Unit: 1638

Examiner: Unassigned

Title: Producing Process of Sterile Plants, Plants Obtained by the Process, and Use of the Plants

Attorney Docket: 12480-000175/US

PETITION UNDER 37 C.F.R. § 1.181 TO WITHDRAW HOLDING OF ABANDONMENT

Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314
MAIL STOP PETITION

June 30, 2009

Dear Sir:

In response to the Notice of Abandonment mailed May 14, 2009 in connection with the subject application, Applicants hereby respectfully petition under the provisions of 37 C.F.R. 1.181 and M.P.E.P. §711.03(c) for decision to withdraw the holding of abandonment.

The Notice of Abandonment dated May 14, 2009 asserts that Applicants failed to properly or timely respond to a July 6, 2006 Notice of Missing Requirements. However, a review of the file for the present application confirms that the July 6, 2006 Notice of Missing Requirements was fully, properly, and timely responded to by the offices of the undersigned.

More specifically, on March 10, 2006 this application was filed as a PCT application in the US Receiving Office, with a paper Sequence Listing and a Computer Readable Form (CRF) of the Sequence Listing. On July 7, 2006 the U.S. Patent & Trademark Office (herein "PTO") mailed a Notice of Missing Requirements asserting that the CRF was defective and providing a set of specific errors in a marked-up Raw Sequence Listing. A copy of the July 7, 2006 Notice of Missing Requirements and marked-up Raw Sequence Listing are attached hereto together as **Exhibit A**.

On August 29, 2006, Applicants, through the offices of the undersigned, filed with the PTO a Response to Notice of Missing Requirements together with a revised Sequence Listing in paper and CRF forms. The errors identified in the July 7, 2006 marked-up Raw Sequence Listing were corrected at this time. Copies of the August 29, 2006 Response to Notice of Missing Requirements together with the paper copy of the revised Sequence Listing and the postcard confirming receipt of the foregoing by the PTO are attached hereto as **Exhibit B**.

About one year later, on July 30, 2007, the PTO mailed a Notification of Defective Response asserting that the August 29, 2006 CRF was defective. However, that Notification includes the same specific errors that were identified in the July 2006 marked-up Raw Sequence Listing. In fact, it is a photocopy of the marked-up Raw Sequence Listing from the July 7, 2006 communication. Because those errors had been corrected by the August 29, 2006 Sequence Listing (see **Exhibit B**), this communication from the PTO was factually inaccurate and, we submit, defective.

In late August 2007, our offices had an e-mail exchange with the PTO regarding the Sequence Listing issue. The Patent Office located the CRF of the August 29, 2006 Sequence Listing in the artifact file, checked it and found a single error in it. However, that error was different than the errors that were raised in the July 7, 2006 Notice of Missing Requirements or the July 30, 2007 Notification of Defective Response. A copy of the e-mail received from the PTO is attached hereto as **Exhibit C**.

That the error identified in the CRF located in the PTO's artifact file in August 2007 was not one of those identified in the July 7, 2006 Notice of Missing Requirements (or the July 30, 2007 Notification of Defective Response) establishes

that the PTO did, in fact, receive the corrected Sequence Listing back in August 2006. If the PTO had not received the corrected Sequence Listing, then the errors that were identified in July 7, 2006 Notice of Missing Requirements would have been identified again. Instead, those errors had been corrected by Applicants and the Sequence Listing that was located and reviewed by the PTO in August 2007 was, in fact, the corrected version. For at least this reason, the May 14, 2009 Notice of Abandonment based on alleged failure to properly or timely respond to the July 6, 2006 Notice of Missing Requirements is factually incorrect, improper and should be withdrawn.

In addition, despite the identification of a new error in August 2007, no Notice of Defective Sequence Listing was issued by the PTO. The newly identified error was minor - in an information box for just one of the 164 sequences in the Sequence Listing an amino acid sequence was inadvertently referred to as a DNA sequence. Because this error had not previously been identified in any communication from the Patent Office, a new Notice of Defective Sequence Listing should have issued at this time if correction was deemed necessary.

Despite the absence of a new Notice of Defective Sequence Listing, and the absence of any obligation to respond to any office action, Applicants electronically submitted a new CRF for the Sequence Listing correcting the single newly-found error. A copy of a printout from PAIR showing the September 4, 2007 electronic submission is attached hereto as **Exhibit D**. In addition, the undersigned downloaded what was identified as "version 2" of the Sequence Listing in this application from PAIR and found that it contained correction of both (1) the originally identified errors (from the July 7, 2006 Notice of Missing Requirements) and (2) the error that was newly-identified in August 2007. A copy of that downloaded Sequence Listing is attached hereto as **Exhibit E**.

In view of the foregoing, it is readily apparent that the abandonment of the present application was due solely to error by the PTO. Accordingly, this petition is being timely filed for the purpose of petitioning withdrawal of the abandonment in view of the above-stated facts.

It is further believed that pursuant to M.P.E.P. §711.03(c), no petition fee is necessary in connection with this petition.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. §1.17; particularly, extension of time fees.

In the event that any matters remain at issue in the application, the Examiner is invited to contact the undersigned at (703) 668-8000 in the Northern Virginia area, for the purpose of a telephonic interview.

Respectfully submitted,

HARNESS, DICKEY AND PIERCE P.L.C.

By _____



Bradford Paul Schmidt, Reg. No. 42,128
P.O. Box 8910
Reston, VA 20195

BPS/dab

Attachments: Exhibit A
 Exhibit B
 Exhibit C
 Exhibit D
 Exhibit E

DJD



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
 United States Patent and Trademark Office
 Address: COMMISSIONER FOR PATENTS
 P.O. Box 1450
 Alexandria, Virginia 22313-1450
www.uspto.gov

12480-000175US

| | | |
|-------------------------------|-----------------------|------------------|
| U.S. APPLICATION NUMBER NO. | FIRST NAMED APPLICANT | ATTY. DOCKET NO. |
| 10/574,470 | Masaru Takagi | 12480000175US |
| INTERNATIONAL APPLICATION NO. | | |
| PCT/JP05/00155 | | |
| I.A. FILING DATE | PRIORITY DATE | |
| 01/07/2005 | 01/07/2004 | |

30593
 HARNESS, DICKEY & PIERCE, P.L.C.
 P.O. BOX 8910
 RESTON, VA 20195

*Prev. Docketed
 Miss Rants
 8/21/06*

JUL 06
 HARNESS, DICKEY & PIERCE, P.L.C.

CONFIRMATION NO. 3750
 371 FORMALITIES LETTER

 OC000000019439069

Date Mailed: 07/05/2006

NOTIFICATION OF MISSING REQUIREMENTS UNDER 35 U.S.C. 371 IN THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US)

The following items have been submitted by the applicant or the IB to the United States Patent and Trademark Office as a Designated / Elected Office (37 CFR 1.495).

- Copy of the International Application filed on 03/31/2006
- English Translation of the IA filed on 03/31/2006
- Copy of the International Search Report filed on 03/31/2006
- Copy of IPE Report filed on 03/31/2006
- Preliminary Amendments filed on 03/31/2006
- Information Disclosure Statements filed on 03/31/2006
- Biochemical Sequence Diskette filed on 03/31/2006
- Biochemical Sequence Listing filed on 03/31/2006
- Request for Immediate Examination filed on 03/31/2006
- U.S. Basic National Fees filed on 03/31/2006
- Priority Documents filed on 03/31/2006
- Specification filed on 03/31/2006
- Claims filed on 03/31/2006
- Abstracts filed on 03/31/2006
- Drawings filed on 03/31/2006

The following items **MUST** be furnished within the period set forth below in order to complete the requirements for acceptance under 35 U.S.C. 371:

- Oath or declaration of the inventors, in compliance with 37 CFR 1.497(a) and (b), identifying the application by the International application number and international filing date.
- A copy of the "Sequence Listing" in computer readable form has been submitted. However, the content of the computer readable form does not comply with the requirements of 37 CFR 1.822 and/or 1.823, as indicated on the attached copy of the marked -up "Raw Sequence Listing." Applicant must provide a

substitute computer readable form (CRF) copy of the "Sequence Listing" and a statement that the content of the sequence listing information recorded in computer readable form is identical to the written (on paper or compact disc) sequence listing and, where applicable, includes no new matter, as required by 37 CFR 1.821(e), 1.821(f), 1.821(g), 1.825(b), or 1.825(d).

ALL OF THE ITEMS SET FORTH ABOVE MUST BE SUBMITTED WITHIN TWO (2) MONTHS FROM THE DATE OF THIS NOTICE OR BY 32 MONTHS FROM THE PRIORITY DATE FOR THE APPLICATION, WHICHEVER IS LATER. FAILURE TO PROPERLY RESPOND WILL RESULT IN ABANDONMENT.

The time period set above may be extended by filing a petition and fee for extension of time under the provisions of 37 CFR 1.136(a).

Applicant is cautioned that correction of the above items may cause the specification and drawings page count to exceed 100 pages. If the specification and drawings exceed 100 pages, applicant will need to submit the required application size fee.

For questions regarding compliance to 37 CFR 1.821-1.825 requirements, please contact:

- **For Rules Interpretation, call (571) 272-0951**
- **For Patentin Software Program Help, call Patent EBC at 1-866-217-9197 or directly at 703-305-3028 / 703-308-6845 between the hours of 6 a.m. and 12 midnight, Monday through Friday, EST.**
- **Send e-mail correspondence for Patentin Software Program Help @ ebc@uspto.gov**

Applicant is reminded that any communications to the United States Patent and Trademark Office must be mailed to the address given in the heading and include the U.S. application no. shown above (37 CFR 1.5)

*A copy of this notice **MUST** be returned with the response.*

LAMONT M HUNTER

Telephone: (703) 308-9140 EXT 201

PART 1 - ATTORNEY/APPLICANT COPY

| U.S. APPLICATION NUMBER NO. | INTERNATIONAL APPLICATION NO. | ATTY. DOCKET NO. |
|-----------------------------|-------------------------------|------------------|
| 10/574,470 | PCT/JP05/00155 | 12480000175US |

FORM PCT/DO/EO/905 (371 Formalities Notice)

STIC Biotechnology Systems Branch

RAW SEQUENCE LISTING ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number:

10/514,470
JFWP
4-17-05

Source:

Date Processed by STIC:

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,**
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY**

FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, TELEPHONE: 571-272-2510; FAX: 571-273-0221

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 4.4.0 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

<http://www.uspto.gov/web/offices/pac/checker/chkrnote.htm>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.

Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.

Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

- 1. EFS-Bio (<<http://www.uspto.gov/ebc/efs/downloads/documents.htm>>, EFS Submission User Manual - ePAVE)**
- 2. U.S. Postal Service: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450**
- 3. Hand Carry, Federal Express, United Parcel Service, or other delivery service (EFFECTIVE 01/14/05):
U.S. Patent and Trademark Office, Mail Stop Sequence, Customer Window, Randolph Building, 401 Dulany Street, Alexandria, VA 22314**

Revised 01/10/06



IFWP

RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/574,470

DATE: 04/17/2006
TIME: 12:24:50

Input Set : N:\DA\PTO.DA.txt
Output Set: N:\CRF4\04172006\J574470.raw

3 <110> APPLICANT: Japan Science and Technology Agency
4 National Institute of Advanced Industrial Science and Technology
6 <120> TITLE OF INVENTION: Producing process of plants with sterility, plants produced
by the
7 process, and use thereof
9 <130> FILE REFERENCE: A181-08PCT
C--> 12 <140> CURRENT APPLICATION NUMBER: US/10/574,470
C--> 12 <141> CURRENT FILING DATE: 2006-03-31
12 <150> PRIOR APPLICATION NUMBER: JP 2004-2192
13 <151> PRIOR FILING DATE: 2004-01-07
15 <15C> PRIOR APPLICATION NUMBER: JP 2004-93796
16 <151> PRIOR FILING DATE: 2004-03-26
18 <150> PRIOR APPLICATION NUMBER: JP 2004-221592
19 <151> PRIOR FILING DATE: 2004-07-29
21 <150> PRIOR APPLICATION NUMBER: JP 2004-231544
22 <151> PRIOR FILING DATE: 2004-08-06
25 <160> NUMBER OF SEQ ID NOS: 164
27 <170> SOFTWARE: PatentIn Ver. 2.1

Does Not Comply
Corrected Diskette Needed
(pg.1)

ERRORED SEQUENCES

2328 <210> SEQ ID NO: 152
2329 <211> LENGTH: 6
2330 <212> TYPE: PRT
E--> 2332 <213> ORGANISM:
2332 <400> SEQUENCE: 152
2333 Asp Leu Ser Leu Asp Leu
2334 1 5
2337 <210> SEQ ID NO: 153
2338 <211> LENGTH: 18
2339 <212> TYPE: DNA
E--> 2341 <213> ORGANISM:
2341 <400> SEQUENCE: 153
2342 gatcttagcc taagcctg
2345 <210> SEQ ID NO: 154
2346 <211> LENGTH: 18
2347 <212> TYPE: DNA
E--> 2348 <213> ORGANISM:
2349 <400> SEQUENCE: 154
2350 caggctttagg ctaagatc

Dozens of errors shown exist throughout
the Sequence Listing. Please check subsequent
sequences for similar errors.

file:///C:/CRF4/Outhold/VsrJ574470.htm

pls insert
pls insert
pls insert
Same error
genus/species.
←
Pls
insert
mandatory
numeric
identification
18
2137
18 Response
which CAN
be either
Artificial
Unknown
4/17/2006

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/574,470

DATE: 04/17/2006

TIME: 12:24:51

Input Set : N:\DA\PTO.DA.txt

Output Set: N:\CRF4\04172006\J574470.raw

L:12 M:270 C: Current Application Number differs, Replaced Current Application No

L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date

L:2332 M:282 E: Numeric Field Identifier Missing, <213> is required.

L:2341 M:282 E: Numeric Field Identifier Missing, <213> is required.

L:2349 M:282 E: Numeric Field Identifier Missing, <213> is required.

Please type a plus sign (+) inside this box → +

TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

| | | |
|--|------------------------|----------------------|
| | Application Number | 10/574,470 |
| | Filing Date | March 31, 2006 |
| | Inventor(s) | Masaru TAKAGI et al. |
| | Group Art Unit | Unassigned |
| | Examiner Name | Unassigned |
| | Attorney Docket Number | 12480-000175/US |

ENCLOSURES (check all that apply)

| | | |
|--|--|---|
| <input type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Fee Attached <input checked="" type="checkbox"/> Amendment <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input checked="" type="checkbox"/> Response to Missing Parts/ Incomplete Application <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53 | <input type="checkbox"/> Assignment Papers (for an Application) <input type="checkbox"/> Letter to the Official Draftsperson and _____ Sheets of Formal Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____ | <input type="checkbox"/> After Allowance Communication to Group <input type="checkbox"/> LETTER SUBMITTING APPEAL BRIEF AND APPEAL BRIEF (w/clean version of pending claims) <input type="checkbox"/> Appeal Communication to Group (Notice of Appeal, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Other Enclosure(s) (please identify below): Declaration Statement Under 37 C.F.R. § 1.821(f) Copy of Sequence Listing Computer Readable Format (CRF) Sequence Listing (CD) Copy of Notice to File Missing Requirements |
| Remarks | | |

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

| | | | |
|-------------------------------|--|----------------------------------|--------------------|
| Firm or Individual name | Harness, Dickey & Pierce, P.L.C. | Attorney Name Donald J. Daley | Reg. No. 34,313 |
| Signature |  | | |
| Date | August 29, 2006 | | |

Mail Stop PCT
PATENT
12480-000175/US

IN THE U.S. PATENT AND TRADEMARK OFFICE

APPLICATION. NO.: 10/574,470
APPLICANT: Masaru TAKAGI et al.
INTERNATIONAL APPL. NO.: PCT/JP2005/000155
CONF.: 3750
FILED: March 31, 2006
FOR: PRODUCING PROCESS OF STERILE
PLANTS, PLANTS OBTAINED BY THE
PROCESS, AND USE OF PLANTS

RESPONSE TO NOTICE TO FILE MISSING
REQUIREMENTS OF AN APPLICATION

Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314
Mail Stop PCT

August 29, 2006

Sir:

Under the provisions of 37 C.F.R. § 1.494 or 37 C.F.R. § 1.495, attached hereto are the following additional items necessary for entering the national phase in connection with the above-identified PCT international application.

- Executed Declaration and Power of Attorney.
- Original Photocopy
- The specification attached to the executed Declaration and Power of Attorney is a true copy of the specification which was filed in the U.S. Patent and Trademark Office on

, including any amendments thereto (if applicable) filed on even date therewith.

The undersigned hereby declares that "Attorney Docket No. 12480-000175/US" on page 1 of the attached inventors' Declaration corresponds to Appl. No. 10/574,470, filed March 31, 2006 entitled "PRODUCING PROCESS OF STERILE PLANTS, PLANTS OBTAINED BY THE PROCESS, AND USE OF PLANTS."

English language specification, claims, and Abstract with () sheets of drawings.

Applicant claims small entity status under 37 C.F.R. § 1.27.

Attached is a copy of Form PCT/DO/EO/905.

No extension fee is required because the undersigned has filed the documents within the allotted time given by the Notification of Missing Requirements (Form PCT/DO/EO/905). However, if for some reason it is determined that an extension of time is necessary, applicant hereby respectfully petitions for an extension of time for the filing of the present paper in accordance with the provisions of 37 C.F.R. § 1.136 and 37 C.F.R. § 1.17.

Applicant(s) hereby respectfully petitions for () month(s) extension of time for the filing of the present paper in accordance with the provisions of 37 C.F.R. § 1.136 and 37 C.F.R. § 1.17. The required fee of \$0.00 is attached hereto.

The Government Filing Surcharge in the amount of \$130 in accordance with 37 C.F.R. §§ 1.494 and 1.492 was previously paid for concurrently with the filing of the application on March 31, 2006.

- Submitted concurrently herewith under separate cover for recording is an Assignment.
- A Fee of \$0.00 to cover the increase in fees of the filing Surcharge is enclosed.
- Check(s) in the amount of \$0.00 to cover the above-mentioned fees is/are enclosed.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fee required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

HARNESS, DICKEY & PIERCE, P.L.C.

By D. Brummett (41,646)
Donald J. Daley, Reg. No. 34,313
P.O. Box 8910
Reston, VA 20195
(703) 668-8000

DJD/GPB:ame

Attachments

(Rev. 01/13/05)

DECLARATION AND POWER OF ATTORNEY

Atty. Dkt. No.: 12480-000175/US

DECLARATION

As a below named inventor, I hereby declare that:

My residence, mailing address and citizenship are as stated below next to my name,

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

PRODUCING PROCESS OF STERILE PLANTS, PLANTS OBTAINED BY THE PROCESS, AND USE OF THE PLANTS

the specification of which (check one)

- is attached hereto.
or
 was filed on January 7, 2005 as Application Serial No. or PCT International Application No. PCT/JP2005/000155 and was amended on November 4, 2005 (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR § 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

I hereby claim foreign priority benefits under 35 U.S.C. §§ 119(a)-(d) or 365(b) of any foreign application(s) for patent or inventor's certificate, or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or any PCT international application having a filing date before that of the application on which priority is claimed:

| PRIOR FOREIGN APPLICATION(S) | | | | |
|------------------------------|---------|----------------------------|-------------------------------------|--------------------------|
| APPN. SERIAL NO. | COUNTRY | DATE FILED (MM/DD/YYYY) | PRIORITY CLAIM | |
| | | | Yes | No |
| 2004-002191 | JAPAN | 01/07/2004 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2004-093796 | JAPAN | 03/26/2004 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2004-221592 | JAPAN | 07/29/2004 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2004-231544 | JAPAN | 08/06/2004 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

DECLARATION AND POWER OF ATTORNEY

I hereby claim the benefit under 35 U.S.C. § 119(e) of any United States provisional application(s) listed below:

| PRIOR PROVISIONAL APPLICATION(S) | |
|----------------------------------|-------------------------|
| APPN. SERIAL NO. | DATE FILED (MM/DD/YYYY) |
| | |
| | |

I hereby claim the benefit under 35 U.S.C. § 120 of any United States application(s) listed below:

| PRIOR U.S. APPLICATION(S) | | |
|---------------------------|-------------------------|--|
| APPN. SERIAL NO. | DATE FILED (MM/DD/YYYY) | STATUS - PATENTED, PENDING, ABANDONED |
| | | |
| | | |
| | | |
| | | |

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. § 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

POWER OF ATTORNEY

I hereby appoint the following attorneys with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith.

| | |
|--------------------|-----------------|
| John A. Castellano | Reg. No. 35,094 |
| Terry L. Clark | Reg. No. 32,644 |
| Donald J. Daley | Reg. No. 34,313 |
| Gary D. Yacura | Reg. No. 35,416 |

and all individuals assigned to Customer No. 30593.

DECLARATION AND POWER OF ATTORNEY

Atty. Dkt. No.: 12480-000175/JS

Full name of sole or first inventor: Masaru TAKAGI

Inventor's signature: Masaru Takagi

Date: April 19, 2006

Residence: c/o NATIONAL INSTITUTE OF ADVANCED
INDUSTRIAL SCIENCE AND TECHNOLOGY
Tsukuba Central 4, 1-1, Higashi 1-chome, Tsukuba-shi
Ibaraki 305-8562 Japan

Citizenship: Japanese

Mailing Address: SAME AS ABOVE

Full name of second joint inventor: Keiichiro HIRATSU

Inventor's signature: Keiichiro Hiratsu

Date: April 1, 19, 2006

Residence: c/o NATIONAL INSTITUTE OF ADVANCED
INDUSTRIAL SCIENCE AND TECHNOLOGY
Tsukuba Central 4, 1-1, Higashi 1-chome, Tsukuba-shi
Ibaraki 305-8562 Japan

Citizenship: Japanese

Mailing Address: SAME AS ABOVE

Full name of third joint inventor: Nobutaka MITSUDA

Inventor's signature: Nobutaka Mitsuda

Date: April, 19, 2006

Residence: c/o NATIONAL INSTITUTE OF ADVANCED
INDUSTRIAL SCIENCE AND TECHNOLOGY
Tsukuba Central 4, 1-1, Higashi 1-chome, Tsukuba-shi
Ibaraki 305-8562 Japan

Citizenship: Japanese

Mailing Address: SAME AS ABOVE

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.: 10/574,470 Confirmation No.: 3750

Applicant: Masaru TAKAGI et al. Group Art Unit: Unassigned

Filing Date: March 31, 2006 Examiner: Unassigned

Title: PRODUCING PROCESS OF STERILE PLANTS, PLANTS
OBTAINED BY THE PROCESS, AND USE OF PLANTS

Attorney Docket: 12480-000175/US

Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314
Mail Stop Sequence

August 29, 2006

PRELIMINARY AMENDMENT
and
RESPONSE TO NOTICE TO COMPLY

Sir:

In response to the Notice to Comply with Requirements for Patent Applications Containing Nucleotide Sequence and/or Amino Acid Sequence Disclosures ("Notice") dated June 29, 2006, the Applicants hereby provide a Sequence Listing, in both hardcopy and computer readable form, and respectfully request entry of this Sequence Listing in order to comply with the requirements of 37 C.F.R. §§ 1.821-1.825.

REMARKS

Favorable reconsideration of this application in light of the following remarks is respectfully requested.

The Sequence Listing has been amended to include additional information at lines <220> and <223> for each sequence identified as an “Artificial Sequence” as indicated in the Raw Sequence Listing Error Summary provided with the Notice. The actual sequences of amino acids and nucleotides have not been amended and are intended to be and are believed to be identical to those originally submitted.

No claims having been canceled or added, the Applicants respectfully submit that claims 1-36 remain properly under consideration in this application.

CONCLUSION

In view of the above remarks, the Applicants respectfully submit that the present application is in condition for examination and allowance. A Notice to that effect is respectfully requested.

If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to contact the undersigned.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge any underpayment or non-payment of any fees required under 37 C.F.R. §§ 1.16 or 1.17, or credit any overpayment of such fees, to Deposit Account No. 08-0750, including, in particular, extension of time fees.

Respectfully submitted,

HARNESS, DICKEY & PIERCE, P.L.C.

By D.J. Daley (41,646)
Donald J. Daley, Reg. No. 34,313

P.O. Box 8910
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Enclosures: Statement Under 37 C.F.R. § 1.821(f)
Copy of Sequence Listing
Verification Summary Report (Checker 4.4.0 Output)
Computer Readable Format (CRF) Sequence Listing (CD)

JST_A181-08US Sequence Listing (Amended).txt
SEQUENCE LISTING

<110> Japan Science and Technology Agency
National Institute of Advanced Industrial Science and Technology

<120> Producing process of plants with sterility, plants produced by the process,
and use thereof

<130> A181-08PCT

<150> JP 2004-2192
<151> 2004-01-07

<150> JP 2004-93796
<151> 2004-03-26

<150> JP 2004-221592
<151> 2004-07-29

<150> JP 2004-231544
<151> 2004-08-06

<160> 164

<170> PatentIn Ver. 2.1

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Page 1

JST_A181-08US Sequence Listing (Amended).txt
Synthesized Amino Acid Sequence

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1 5 10

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<211> 10
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Synthesized Amino Acid Sequence

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JST_A181-08US Sequence Listing (Amended).txt

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JST_A181-08US Sequence Listing (Amended).txt
Synthesized Amino Acid Sequence

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JST_A181-08US Sequence Listing (Amended).txt

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35 40 45

Cys Ser Phe Cys Lys Arg Glu Phe Arg Ser Ala Gln Ala Leu Gly Gly
50 55 60

His Met Asn Val His Arg Arg Asp Arg Ala Arg Leu Arg Leu Gln Gln
65 70 75 80

Ser Pro Ser Ser Ser Thr Pro Ser Pro Pro Tyr Pro Asn Pro Asn
85 90 95

Tyr Ser Tyr Ser Thr Met Ala Asn Ser Pro Pro Pro His His Ser Pro
100 105 110

Leu Thr Leu Phe Pro Thr Leu Ser Pro Pro Ser Ser Pro Arg Tyr Arg
115 120 125

Ala Gly Leu Ile Arg Ser Leu Ser Pro Lys Ser Lys His Thr Pro Glu
130 135 140

Asn Ala Cys Lys Thr Lys Lys Ser Ser Leu Leu Val Glu Ala Gly Glu
145 150 155 160

Ala Thr Arg Phe Thr Ser Lys Asp Ala Cys Lys Ile Leu Arg Asn Asp
165 170 175

Glu Ile Ile Ser Leu Glu Leu Glu Ile Gly Leu Ile Asn Glu Ser Glu
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Gln Asp Leu Asp Leu Glu Leu Arg Leu Gly Phe Ala
Page 5

195

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JST_A181-08US Sequence Listing (Amended).txt

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JST_A181-08US Sequence Listing (Amended).txt

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JST_A181-08US Sequence Listing (Amended).txt

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JST_A181-08US Sequence Listing (Amended).txt

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JST_A181-08US Sequence Listing (Amended).txt

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JST_A181-08US Sequence Listing (Amended).txt

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<210> 49
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JST_A181-08US Sequence Listing (Amended).txt

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Synthesized Amino Acid Sequence

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JST_A181-08US Sequence Listing (Amended).txt

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<210> 56
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JST_A181-08US Sequence Listing (Amended).txt

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JST_A181-08US Sequence Listing (Amended).txt
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JST_A181-08US Sequence Listing (Amended).txt

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JST_A181-08US Sequence Listing (Amended).txt

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<210> 77
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JST_A181-08US Sequence Listing (Amended).txt

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18

JST_A181-08US Sequence Listing (Amended).txt

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Synthesized DNA Sequence

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<211> 33
<212> DNA

<213> Artificial Sequence

<220>
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Synthesized DNA Sequence

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gatctggatc tagaactccg tttgggttcc gct 33

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agcgaaaccc aaacggatgtt ctagatccag atc 33

<210> 88
<211> 36
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<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Page 20

JST_A181-08US Sequence Listing (Amended).txt
Synthesized DNA Sequence

<400> 88
cttgatctgg atctagaact ccgtttgggt ttcgct 36

<210> 89
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Synthesized DNA Sequence

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<213> Arabidopsis thaliana

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ccatggagct atggagatata tgataattgc caacaggatc atgattatct tcttagggttt 120
tcatggccac caagatccta cacttgcagc ttctgcaaaa gggaaattcag atcggctcaa 180
gcacttggtg gccacatgaa tgttcacaga agagacagag caagactcag attacaacag 240
tctccatcat catcttcaac accttctcct ccttacccta accctaatta ctcttactca 300
accatggcaa acttcctcc tcctcatcat tctcctctaa ccctatttcc aaccctttct 360
cctccatctt cccaagata tagggcaggt ttgatccgtt ccttgagccc caagtcaaaa 420
catacaccag aaaacgcttg taagactaag aaatcatctc ttttagtggg ggctggagag 480
gctacaaggat tcaccagtaa agatgcttgc aagatccctga ggaatgtatga aatcatcagc 540
ttggagcttg agattggttt gattaacgaa tcagagcaag atctggatct agaactccgt 600
ttgggttcg cttaa 615

<210> 91
<211> 93
<212> DNA
<213> Arabidopsis thaliana

<400> 91
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ctggatcttag aactccgtt gggtttcgct taa 93

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<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 92
gatctaaacc tccgtctg 18

<210> 93
<211> 18

JST_A181-08US Sequence Listing (Amended).txt

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 93

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18

<210> 94

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<212> DNA

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<223> Description of Artificial Sequence:Artificially
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18

<210> 95

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<212> DNA

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<220>

<223> Description of Artificial Sequence:Artificially
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18

<210> 96

<211> 18

<212> DNA

<213> Artificial Sequence

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18

<210> 97

<211> 18

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cagacggagc tgttagatc

18

JST_A181-08US Sequence Listing (Amended).txt

<210> 98

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18

<210> 99

<211> 18

<212> DNA

<213> Artificial Sequence

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18

.... <210> 100

<211> 18

<212> DNA

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18

<210> 101

<211> 18

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<213> Artificial Sequence

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<210> 102

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

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JST_A181-08US Sequence Listing (Amended).txt

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<210> 104
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Synthesized DNA Sequence

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18

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Synthesized DNA Sequence

<400> 105
caaacggagt tctagctg

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<210> 106
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
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18

<210> 107
<211> 18
<212> DNA
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Synthesized DNA Sequence

JST_A181-08US Sequence Listing (Amended).txt

<400> 107
caagttgagt tctagatc 18

<210> 108
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<213> Artificial Sequence

<220>
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<400> 108
gatctagaac tccagttg 18

<210> 109
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 109
caactggagt tctagatc 18

<210> 110
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 110
acgcttgaat taagactc 18

<210> 111
<211> 18
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<400> 111
gagtcttaat tcaaggct 18

<210> 112
<211> 18
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<220>
<223> Description of Artificial Sequence:Artificially
Page 25

JST_A181-08US Sequence Listing (Amended).txt
Synthesized DNA Sequence

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<210> 113
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<212> DNA
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<210> 114
<211> 18
<212> DNA
<213> Artificial Sequence

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<223> Description of Artificial Sequence:Artificially
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<400> 114
agccttgaat taagactc 18

<210> 115
<211> 18
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<220>
<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 115
gagtcttaat tcaaggct 18

<210> 116
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<223> Description of Artificial Sequence:Artificially
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<210> 117
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<213> Artificial Sequence

JST_A181-08US Sequence Listing (Amended).txt

<220>
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<400> 118
gatcttacct taagactc 18

<210> 119
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<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 119
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<210> 122
<211> 18
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JST_A181-08US Sequence Listing (Amended).txt
<213> Artificial Sequence

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<400> 122
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18

<210> 123
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<223> Description of Artificial Sequence:Artificially
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<210> 124
<211> 18
<212> DNA
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<220>
<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

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gatctcgaat ttctgtctc

18

<210> 125
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<212> DNA
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18

<210> 126
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18

<210> 127

JST_A181-08US Sequence Listing (Amended).txt

<211> 18
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<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

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<210> 128
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tcgcttgatc tacacctg 18

<210> 129
<211> 18
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<220>
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Synthesized DNA Sequence

<400> 129
caggtttaga tcaaggcga 18

<210> 130
<211> 18
<212> DNA
<213> Artificial Sequence

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<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 130
gatcttacgc taaagctg 18

<210> 131
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<220>
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Synthesized DNA Sequence

<400> 131
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JST_A181-08US Sequence Listing (Amended).txt

<210> 132

<211> 18

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence:Artificially
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<400> 132

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<210> 133

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<400> 133

cagctttagg ctaaggatc

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<210> 134

<211> 232

<212> PRT

<213> Arabidopsis thaliana

<400> 134

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20 25 30
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35 40 45
Ser Ser Ser Asn Lys Leu His Glu Tyr Ile Ser Pro Asn Thr Thr Thr
50 55 60
Lys Glu Ile Val Asp Leu Tyr Gln Thr Ile Ser Asp Val Asp Val Trp
65 70 75 80
Ala Thr Gln Tyr Glu Arg Met Gln Glu Thr Lys Arg Lys Leu Leu Glu
85 90 95
Thr Asn Arg Asn Leu Arg Thr Gln Ile Lys Gln Arg Leu Gly Glu Cys
100 105 110
Leu Asp Glu Leu Asp Ile Gln Glu Leu Arg Arg Leu Glu Asp Glu Met
115 120 125
Glu Asn Thr Phe Lys Leu Val Arg Glu Arg Lys Phe Lys Ser Leu Gly
130 135 140
Asn Gln Ile Glu Thr Thr Lys Lys Asn Lys Ser Gln Gln Asp Ile
145 150 155 160
Gln Lys Asn Leu Ile His Glu Leu Glu Leu Arg Ala Glu Asp Pro His
165 170 175
Tyr Gly Leu Val Asp Asn Gly Gly Asp Tyr Asp Ser Val Leu Gly Tyr
180 185 190
Gln Ile Glu Gly Ser Arg Ala Tyr Ala Leu Arg Phe His Gln Asn His
195 200 205
His His Tyr Tyr Pro Asn His Gly Leu His Ala Pro Ser Ala Ser Asp
210 215 220
Ile Ile Thr Phe His Leu Leu Glu
225 230

JST_A181-08US Sequence Listing (Amended).txt

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<212> DNA
<213> Arabidopsis thaliana

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gcttagggttt cgatttatcat gttctctagc tccacaacaagc ttcatgagta tatcagccct 180
aacaccacaa cgaaggagat cgtagatctg taccaaacta tttctgatgt cgatgttgg 240
gccactcaat atgagcgaat gcaagaaaacc aagagggaaac tggtgagac aaatagaaat 300
ctccggactc agatcaagca gaggcttagt gagttttgg acgagcttga cattcaggag 360
ctgcgtcgtc ttgaggatga aatggaaaac actttcaaac tcgttcgcga ggcgaagttc 420
aaatctttg ggaatcagat cgagaccacc aagaaaaaga acaaaaagtca acaagacata 480
caaaagaatc tcatacatga gctggaacta agagctgaag atcctcacta tggacttagta 540
gacaatggag gagattacga ctcagttctt ggataccaaa tcgaagggtc acgtgcttac 600
gctttcgtt tccaccagaa ccatcaccac tattacccca accatggcct tcatgcaccc 660
tctgcctctg acatcattac ctccatctt cttaataaa 699

<210> 136
<211> 365
<212> PRT
<213> Arabidopsis thaliana

<400> 136
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20 25 30
Tyr Leu Arg Lys Lys Val Asn Ser Ile Glu Ile Asp Leu Asp Val Ile
35 40 45
Arg Asp Val Asp Leu Asn Lys Leu Glu Pro Trp Asp Ile Gln Glu Met
50 55 60
Cys Lys Ile Gly Thr Thr Pro Gln Asn Asp Trp Tyr Phe Phe Ser His
65 70 75 80
Lys Asp Lys Lys Tyr Pro Thr Gly Thr Arg Thr Asn Arg Ala Thr Ala
85 90 95
Ala Gly Phe Trp Lys Ala Thr Gly Arg Asp Lys Ile Ile Tyr Ser Asn
100 105 110
Gly Arg Arg Ile Gly Met Arg Lys Thr Leu Val Phe Tyr Lys Gly Arg
115 120 125
Ala Pro His Gly Gln Lys Ser Asp Trp Ile Met His Glu Tyr Arg Leu
130 135 140
Asp Asp Asn Ile Ile Ser Pro Glu Asp Val Thr Val His Glu Val Val
145 150 155 160
Ser Ile Ile Gly Glu Ala Ser Gln Asp Glu Gly Trp Val Val Cys Arg
165 170 175
Ile Phe Lys Lys Lys Asn Leu His Lys Thr Leu Asn Ser Pro Val Gly
180 185 190

JST_A181-08US Sequence Listing (Amended).txt

Gly Ala Ser Leu Ser Gly Gly Asp Thr Pro Lys Thr Thr Ser Ser
195 200 205

Gln Ile Phe Asn Glu Asp Thr Leu Asp Gln Phe Leu Glu Leu Met Gly
210 215 220

Arg Ser Cys Lys Glu Glu Leu Asn Leu Asp Pro Phe Met Lys Leu Pro
225 230 235 240

Asn Leu Glu Ser Pro Asn Ser Gln Ala Ile Asn Asn Cys His Val Ser
245 250 255

Ser Pro Asp Thr Asn His Asn Ile His Val Ser Asn Val Val Asp Thr
260 265 270

Ser Phe Val Thr Ser Trp Ala Ala Leu Asp Arg Leu Val Ala Ser Gln
275 280 285

Leu Asn Gly Pro Thr Ser Tyr Ser Ile Thr Ala Val Asn Glu Ser His
290 295 300

Val Gly His Asp His Leu Ala Leu Pro Ser Val Arg Ser Pro Tyr Pro
305 310 315 320

Ser Leu Asn Arg Ser Ala Ser Tyr His Ala Gly Leu Thr Gln Glu Tyr
325 330 335

Thr Pro Glu Met Glu Leu Trp Asn Thr Thr Ser Ser Leu Ser Ser
340 345 350

Ser Pro Gly Pro Phe Cys His Val Ser Asn Gly Ser Gly
355 360 365

<210> 137

<211> 1098

<212> DNA

<213> Arabidopsis thaliana

<400> 137

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attcaagaga tggtaaaaat aggaacaacg ccacaaaacg actggattt ctttagccac 240
aaggacaaaa aatatccgac gggAACGAGA actaacagag ccactgcggc tggattttgg 300
aaagcaactg gcccgcacaa gatcatatat agcaatggcc gttagattgg gatgagaaag 360
actctgttt tctacaaaagg ccgagctcct cacggccaaa aatctgattt gatcatgcat 420
aatatagac tcgatgacaa cattatttcc cccgaggatg tcaccgttca tgaggtcgtg 480
agtttatag gggaaagcatc acaagacgaa ggatgggtgg tggatgtcgat tttcaagaag 540
aagaatcttc acaaaaacctt aaacagtccc gtcggaggag ctccctgag cggcgccgaa 600
gatacgccga agacgacatc atctcgatc ttcaacgagg atactctcgaa ccaatttctt 660
gaacttatgg ggagatctt taaaagaagat ctaaatctt accctttcat gaaactccca 720
aacctcgaaa gcccctaacag tcaggcaatc aacaactgcc acgtaaagctc tccccacact 780
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agcctaaacc ggtccgcttc gtaccacgcc gggttaacac aggaatatac accggagatg 1020
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<210> 138

JST_A181-08US Sequence Listing (Amended).txt

<211> 367

<212> PRT

<213> Arabidopsis thaliana

<400> 138

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Trp Ser Pro Glu Glu Asp Glu Lys Leu Ile Asn Tyr Ile Asn Ser Tyr
20 25 30

Gly His Gly Cys Trp Ser Ser Val Pro Lys His Ala Gly Thr Tyr Thr
35 40 45

His Ile His Gly Phe Cys Leu Gln Arg Cys Gly Lys Ser Cys Arg Leu
50 55 60

Arg Trp Ile Asn Tyr Leu Arg Pro Asp Leu Lys Arg Gly Ser Phe Ser
65 70 75 80

Pro Gln Glu Ala Ala Leu Ile Ile Glu Leu His Ser Ile Leu Gly Asn
85 90 95

Arg Trp Ala Gln Ile Ala Lys His Leu Pro Gly Arg Thr Asp Asn Glu
100 105 110

Val Lys Asn Phe Trp Asn Ser Ser Ile Lys Lys Lys Leu Met Ser His
115 120 125

His His His Gly His His His His Leu Ser Ser Met Ala Ser Leu
130 135 140

Leu Thr Asn Leu Pro Tyr His Asn Gly Phe Asn Pro Thr Thr Val Asp
145 150 155 160

Asp Glu Ser Ser Arg Phe Met Ser Asn Ile Ile Thr Asn Thr Asn Pro
165 170 175

Asn Phe Ile Thr Pro Ser His Leu Ser Leu Pro Ser Pro His Val Met
180 185 190

Thr Pro Leu Met Phe Pro Thr Ser Arg Glu Gly Asp Phe Lys Phe Leu
195 200 205

Thr Thr Asn Asn Pro Asn Gln Ser His His His Asp Asn Asn His Tyr
210 215 220

Asn Asn Leu Asp Ile Leu Ser Pro Thr Pro Thr Ile Asn Asn His His
225 230 235 240

Gln Pro Ser Leu Ser Ser Cys Pro His Asp Asn Asn Leu Gln Trp Pro
245 250 255

Ala Leu Pro Asp Phe Pro Ala Ser Thr Ile Ser Gly Phe Gln Glu Thr
260 265 270

Leu Gln Asp Tyr Asp Asp Ala Asn Lys Leu Asn Val Phe Val Thr Pro
275 280 285

Phe Asn Asp Asn Ala Lys Lys Leu Leu Cys Gly Glu Val Leu Glu Gly
290 295 300

Lys Val Leu Ser Ser Ser Pro Ile Ser Gln Asp His Gly Leu Phe
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305 310 315 320

Leu Pro Thr Thr Tyr Asn Phe Gln Met Thr Ser Thr Ser Asp His Gln
325 330 335

His His His Arg Val Asp Ser Tyr Ile Asn His Met Ile Ile Pro Ser
340 345 350

Ser Ser Ser Ser Ser Pro Ile Ser Cys Gly Gln Tyr Val Ile Thr
355 360 365

<210> 139

<211> 1104

<212> DNA

<213> Arabidopsis thaliana

<400> 139

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cctaaacatg caggcaccta tacacatata catgggtttt gttgcagag atgtggaaag 180
agttgttagat taagatggat aaatttatcta agacctgatc ttaaacgtgg aagcttctct 240
cctcaagaag ctgctcttat cattgagctt cacagcattc ttggtaacag atgggctcaa 300
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<210> 140

<211> 253

<212> PRT

<213> Arabidopsis thaliana

<400> 140

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1 5 10 15

Lys Ser Gly Arg Gly Lys Ile Glu Ile Lys Arg Ile Glu Asn Thr Thr
20 25 30

Asn Arg Gln Val Thr Phe Cys Lys Arg Arg Asn Gly Leu Leu Lys Lys
35 40 45

Ala Tyr Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Leu Ile Val
50 55 60

Phe Ser Ser Arg Gly Arg Leu Tyr Glu Tyr Ser Asn Asn Ser Val Lys
65 70 75 80

Gly Thr Ile Glu Arg Tyr Lys Lys Ala Ile Ser Asp Asn Ser Asn Thr
85 90 95

JST_A181-08US Sequence Listing (Amended).txt

Gly Ser Val Ala Glu Ile Asn Ala Gln Tyr Tyr Gln Gln Glu Ser Ala
 100 105 110

Lys Leu Arg Gln Gln Ile Ile Ser Ile Gln Asn Ser Asn Arg Gln Leu
 115 120 125

Met Gly Glu Thr Ile Gly Ser Met Ser Pro Lys Glu Leu Arg Asn Leu
 130 135 140

Glu Gly Arg Leu Glu Arg Ser Ile Thr Arg Ile Arg Ser Lys Lys Asn
 145 150 155 160

Glu Leu Leu Phe Ser Glu Ile Asp Tyr Met Gln Lys Arg Glu Val Asp
 165 170 175

Leu His Asn Asp Asn Gln Ile Leu Arg Ala Lys Ile Ala Glu Asn Glu
 180 185 190

Arg Asn Asn Pro Ser Ile Ser Leu Met Pro Gly Gly Ser Asn Tyr Glu
 195 200 205

Gln Leu Met Pro Pro Pro Gln Thr Gln Ser Gln Pro Phe Asp Ser Arg
 210 215 220

Asn Tyr Phe Gln Val Ala Ala Leu Gln Pro Asn Asn His His Tyr Ser
 225 230 235 240

Ser Ala Gly Arg Gln Asp Gln Thr Ala Leu Gln Leu Val
 245 250

<210> 141
 <211> 762
 <212> DNA
 <213> *Arabidopsis thaliana*

<400> 141

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cgtagaaatg gtttgctcaa gaaagcttac gagctctctg ttctttgtga tgctgaagtc 180
gcactcatcg tcttctctag ccgtggtcgt ctctatgagt actctaacaa cagtgtaaaa 240
gggactattg agaggtacaa gaaggcaata tcggacaatt ctaacaccgg atcgggtggca 300
gaaattaatg cacagtatta tcaacaagaa tcagccaaat tgctcaaca aataatcagc 360
atacaaaaact ccaacaggca attgatgggt gagacgatag ggtcaatgtc tcccaaagag 420
ctcaggaact tggaggcag attagagaga agtattaccc gaatccgatc caagaagaat 480
gagctcttat tttctgaaat cgactacatg cagaaaagag aagttgattt gcataacgat 540
aaccagattc ttcgtgcaaa gatactgaa aatgagagga acaatccgag tataagtcta 600
atgccaggag gatctaacta cgagcagctt atgccaccac ctc当地acgca atctcaaccg 660
tttgattcac ggaatttattt ccaagtgcgc gcattgcaac ctaacaatca ccattactca 720
tccgcgggtc gccaagacca aaccgctctc cagtttgtt aa 762
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<210> 142
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:Artificially
 Synthesized Primer Sequence

<400> 142
 agttagttac ttaagcttgg gcccc

JST_A181-08US Sequence Listing (Amended).txt

<210> 143

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Artificially
Synthesized Primer Sequence

<400> 143

gatccagtaa gcttaattgg ttccggcgcc

30

<210> 144

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Artificially
Synthesized Primer Sequence

<400> 144

tagaattcgc ggccgcactc gag

23

<210> 145

<211> 31

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Artificially
Synthesized Primer Sequence

<400> 145

gagaattcgg gccagagctg cagctggatg g

31

<210> 146

<211> 82

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 146

ctagaggatc cacaattacc aacaacaaca aacaacaaac aacattacaa ttacagatcc 60
cgggggtacc gtcgacgagc tc 82

<210> 147

<211> 73

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

JST_A181-08US Sequence Listing (Amended).txt

<400> 147
cgtcgacggt acccccggga tctgtaattg taatgttgtt tggtgttgtt tggtgttgtt 60
aattgtggat cct 73

<210> 148
<211> 43
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 148
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<210> 149
<211> 47
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 149
tcgacttaag cgaaacccaa acggagttct agatccagat caagccc 47

<210> 150
<211> 29
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized Primer Sequence

<400> 150
atgaccgcgt accaatcgga gctaggagg 29

<210> 151
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized Primer Sequence

<400> 151
cactaactgg agagcggtt ggtcttggcg 30

<210> 152
<211> 6
<212> PRT
<213> Artificial Sequence

JST_A181-08US Sequence Listing (Amended).txt

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized Amino Acid Sequence

<400> 152
Asp Leu Ser Leu Asp Leu
1 5

<210> 153
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
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Synthesized Primer Sequence

<400> 153
gatcttagcc taagcctg 18

<210> 154
<211> 18
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<213> Artificial Sequence

<220>
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Synthesized Primer Sequence

<400> 154
caggctttagg ctaagatc 18

<210> 155
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized Primer Sequence

<400> 155
gatgatgtca aaatctatga gcatatc 27

<210> 156
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<212> DNA
<213> Artificial Sequence

<220>
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Synthesized Primer Sequence

<400> 156
tccactaccca ttcgacacgt gac 23

<210> 157
<211> 30

JST_A181-08US Sequence Listing (Amended).txt

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Artificially
Synthesized Primer Sequence

<400> 157

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<210> 158

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Artificially
Synthesized Primer Sequence

<400> 158

agttagacg tactgtccac aagagattgg

30

<210> 159

<211> 75

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 159

gatccacaat taccaacaac aacaaacaac aaacaacatt acaattacag atcccgaaaa 60
taccgtcgac gagct 75

<210> 160

<211> 67

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 160

cgtcgacggc acccccggga tctgttaattg taatgttgtt tgttgttgt tgttgttgt 60
aattgtg 67

<210> 161

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 161

gatggcgaga ggaaagatcc agatcaag

28

JST_A181-08US Sequence Listing (Amended).txt

<210> 162
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<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 162
ttcaagaaga tggaaggtaa tgatg

25

<210> 163
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<212> DNA
<213> Artificial Sequence

<220>
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Synthesized DNA Sequence

<400> 163
ctggatctgg atctagaact ccgtttgggt ttcgcttaag

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....
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<211> 40
<212> DNA
<213> Artificial Sequence

<220>
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Synthesized DNA Sequence

<400> 164
cttaagcgaa acccaaacgg agttctagat ccagatccag

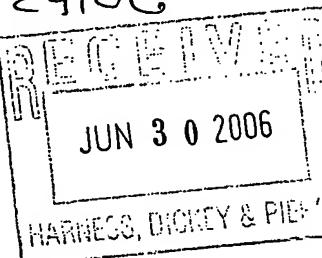
40

DJD



UNITED STATES PATENT AND TRADEMARK OFFICE 12480-000175US

UNITED STATES DEPARTMENT OF COMMERCE
 United States Patent and Trademark Office
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 P.O. Box 1450
 Alexandria, Virginia 22313-1450
www.uspto.gov

| | | |
|---|-----------------------|------------------|
| U.S. APPLICATION NUMBER NO. | FIRST NAMED APPLICANT | ATTY. DOCKET NO. |
| 10/574,470 | Masaru Takagi | 12480000175US |
| INTERNATIONAL APPLICATION NO. | | |
| PCT/JP05/00155 | | |
| I.A. FILING DATE | PRIORITY DATE | |
| 01/07/2005 | 01/07/2004 | |
| CONFIRMATION NO. 3750 | | |
| 371 FORMALITIES LETTER | | |
|  | | |
|  CC000000019439069* | | |

Date Mailed: 06/29/2006

NOTIFICATION OF MISSING REQUIREMENTS UNDER 35 U.S.C. 371 IN THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US)

The following items have been submitted by the applicant or the IB to the United States Patent and Trademark Office as a Designated / Elected Office (37 CFR 1.495).

- Copy of the International Application filed on 03/31/2006
- English Translation of the IA filed on 03/31/2006
- Copy of the International Search Report filed on 03/31/2006
- Copy of IPE Report filed on 03/31/2006
- Preliminary Amendments filed on 03/31/2006
- Information Disclosure Statements filed on 03/31/2006
- Biochemical Sequence Diskette filed on 03/31/2006
- Biochemical Sequence Listing filed on 03/31/2006
- Request for Immediate Examination filed on 03/31/2006
- U.S. Basic National Fees filed on 03/31/2006
- Priority Documents filed on 03/31/2006
- Specification filed on 03/31/2006
- Claims filed on 03/31/2006
- Abstracts filed on 03/31/2006
- Drawings filed on 03/31/2006

The following items **MUST** be furnished within the period set forth below in order to complete the requirements for acceptance under 35 U.S.C. 371:

- Oath or declaration of the inventors, in compliance with 37 CFR 1.497(a) and (b), identifying the application by the International application number and international filing date.
- A copy of the "Sequence Listing" in computer readable form has been submitted. However, the content of the computer readable form does not comply with the requirements of 37 CFR 1.822 and/or 1.823, as indicated on the attached copy of the marked -up "Raw Sequence Listing." Applicant must provide a

substitute computer readable form (CRF) copy of the "Sequence Listing" and a statement that the content of the sequence listing information recorded in computer readable form is identical to the written (on paper or compact disc) sequence listing and, where applicable, includes no new matter, as required by 37 CFR 1.821(e), 1.821(f), 1.821(g), 1.825(b), or 1.825(d).

ALL OF THE ITEMS SET FORTH ABOVE MUST BE SUBMITTED WITHIN TWO (2) MONTHS FROM THE DATE OF THIS NOTICE OR BY 32 MONTHS FROM THE PRIORITY DATE FOR THE APPLICATION, WHICHEVER IS LATER. FAILURE TO PROPERLY RESPOND WILL RESULT IN ABANDONMENT.

The time period set above may be extended by filing a petition and fee for extension of time under the provisions of 37 CFR 1.136(a).

Applicant is cautioned that correction of the above items may cause the specification and drawings page count to exceed 100 pages. If the specification and drawings exceed 100 pages, applicant will need to submit the required application size fee.

For questions regarding compliance to 37 CFR 1.821-1.825 requirements, please contact:

- For Rules Interpretation, call (571) 272-0951
- For Patentin Software Program Help, call Patent EBC at 1-866-217-9197 or directly at 703-305-3028 / 703-308-6845 between the hours of 6 a.m. and 12 midnight, Monday through Friday, EST.
- Send e-mail correspondence for Patentin Software Program Help @ ebc@uspto.gov

Applicant is reminded that any communications to the United States Patent and Trademark Office must be mailed to the address given in the heading and include the U.S. application no. shown above (37 CFR 1.5)

A copy of this notice MUST be returned with the response.

LAMONT M HUNTER

Telephone: (703) 308-9140 EXT 201

PART 1 - ATTORNEY/APPLICANT COPY

| U.S. APPLICATION NUMBER NO. | INTERNATIONAL APPLICATION NO. | ATTY. DOCKET NO. |
|-----------------------------|-------------------------------|------------------|
| 10/574,470 | PCT/JP05/00155 | 12480000175US |

FORM PCT/DO/EO/905 (371 Formalities Notice)

STIC Biotechnology Systems Branch

RAW SEQUENCE LISTING ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 10/574,470
Source: JFWP
Date Processed by STIC: 4-17-02

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, TELEPHONE: 571-272-2510; FAX: 571-273-0221

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 4.4.0 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

<http://www.uspto.gov/web/offices/pac/checker/chkrnote.htm>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.

Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.

Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<<http://www.uspto.gov/ebc/efs/downloads/documents.htm>> , EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
3. Hand Carry, Federal Express, United Parcel Service, or other delivery service (EFFECTIVE 01/14/05):
U.S. Patent and Trademark Office, Mail Stop Sequence, Customer Window, Randolph Building, 401 Dulany Street, Alexandria, VA 22314

Revised 01/10/06



IFWP

RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/574,470

DATE: 04/17/2006
TIME: 12:24:50

Input Set : N:\DA\PTO.DA.txt
Output Set: N:\CRF4\04172006\J574470.raw

3 <110> APPLICANT: Japan Science and Technology Agency
4 National Institute of Advanced Industrial Science and Technology
6 <120> TITLE OF INVENTION: Producing process of plants with sterility, plants produced
by the
7 process, and use thereof
9 <130> FILE REFERENCE: A181-08PCT
C--> 12 <140> CURRENT APPLICATION NUMBER: US/10/574,470
C--> 12 <141> CURRENT FILING DATE: 2006-03-31
12 <150> PRIOR APPLICATION NUMBER: JP 2004-2192
13 <151> PRIOR FILING DATE: 2004-01-07
15 <150> PRIOR APPLICATION NUMBER: JP 2004-93796
16 <151> PRIOR FILING DATE: 2004-03-26
18 <150> PRIOR APPLICATION NUMBER: JP 2004-221592
19 <151> PRIOR FILING DATE: 2004-07-29
21 <150> PRIOR APPLICATION NUMBER: JP 2004-231544
22 <151> PRIOR FILING DATE: 2004-08-06
25 <160> NUMBER OF SEQ ID NOS: 164
27 <170> SOFTWARE: PatentIn Ver. 2.1

Does Not Comply
Corrected Diskette Needed
(PS.1)

Does Not Comply
Corrected Diskette Needed
(pg.1)

ERRORRED SEQUENCES

B--> 2328 <210> SEQ ID NO: 152
2329 <211> LENGTH: 6
2330 <212> TYPE: PRT
B--> 2332 <213> ORGANISM: DPL
2332 <400> SEQUENCE: 152
2333 Asp Leu Ser Leu Asp Leu
2334 1 5
2337 <210> SEQ ID NO: 153
2338 <211> LENGTH: 18
2339 <212> TYPE: DNA
B--> 2341 <213> ORGANISM: P
2341 <400> SEQUENCE: 153
2342 gatcttagcc taagcctg
2345 <210> SEQ ID NO: 154
2346 <211> LENGTH: 18
2347 <212> TYPE: DNA
B--> 2348 <213> ORGANISM: SA
2349 <400> SEQUENCE: 154
2350 caqqcttagg ctaagatc

~~The following errors shown exist throughout the Sequence Listing. Please check subsequent sequences for similar errors.~~

file:///C:/CRF4/Outhold/VsrJ574470.htm

genus/species

18 Respo
which CAN
be either:
Artificial
Unknown OR
4/17/2006

VERIFICATION SUMMARY
PATENT APPLICATION: US/10/574,470

DATE: 04/17/2006
TIME: 12:24:51

Input Set : N:\DA\PTO.DA.txt
Output Set: N:\CRF4\04172006\J574470.raw

L:12 M:270 C: Current Application Number differs, Replaced Current Application No
L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:2332 M:282 E: Numeric Field Identifier Missing, <213> is required.
L:2341 M:282 E: Numeric Field Identifier Missing, <213> is required.
L:2349 M:282 E: Numeric Field Identifier Missing, <213> is required.

| | | | |
|---------------|--|--------------|-----------------|
| Applicant(s): | Masaru TAKAGI et al. | Case No.: | 12480-000175/US |
| Serial No.: | 11/574,470 | Filing Date: | March 31, 2006 |
| Title: | PRODUCING PROCESS OF STERILE PLANTS, PLANTS OBTAINED BY THE PROCESS, AND USE OF THE PLANTS | | |

Transmittal
 Letter Submitting Documents for Completion of an Application
 Declaration
 Preliminary Amendment
 Statement Under 37 C.F.R. 1.821(f)
 Hard Copy of Sequence Listing
 Computer Readable Format (CRF) Sequence Listing (CD)
 Copy of Notice to File Missing Requirements

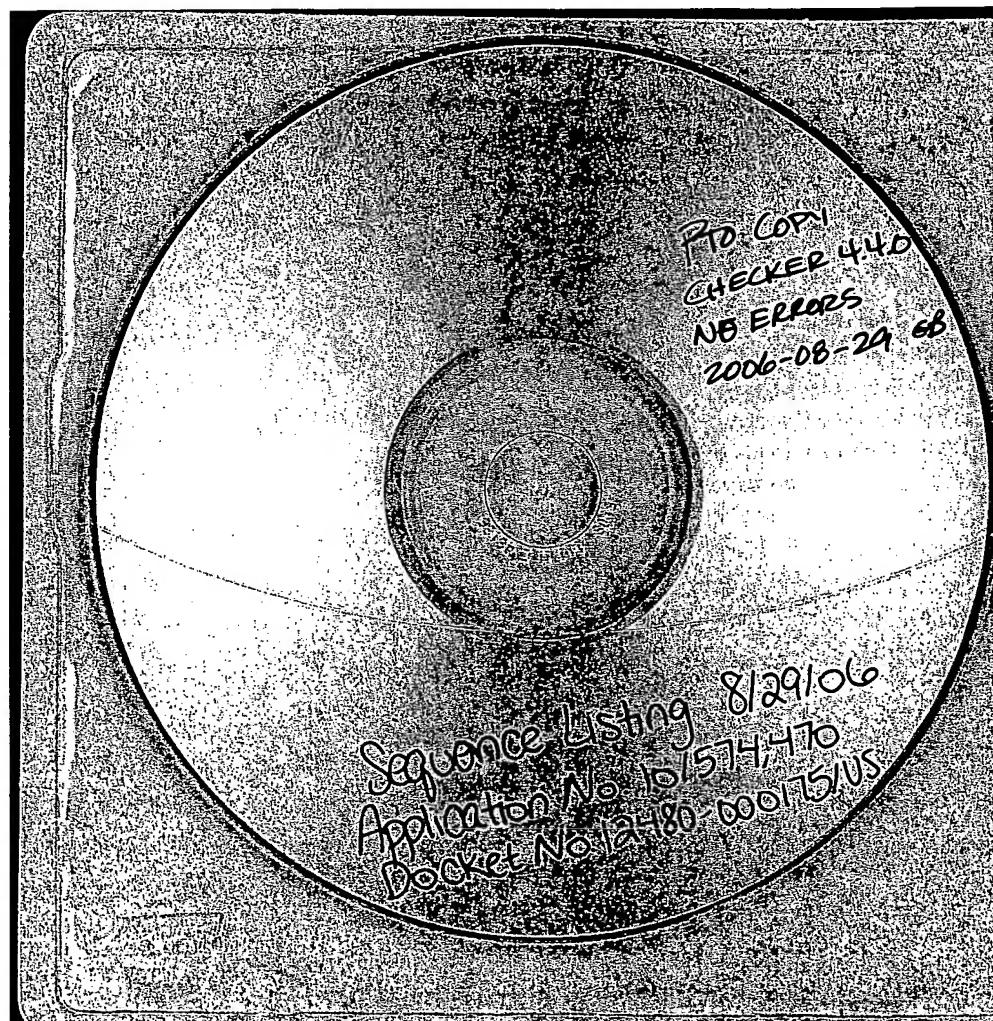
By stamping and returning to Harness, Dickey & Pierce, P.L.C.

USPTO Date Stamp

Due: 08/29/2006

Attorney: DJD/GPB/ame

FILED: 08/29/2006



| | | | |
|---------------|--|--------------|-----------------|
| Applicant(s): | Masaru TAKAGI et al. | Case No.: | 12480-000175/US |
| Serial No.: | 11/574,470 | Filing Date: | March 31, 2006 |
| Title: | PRODUCING PROCESS OF STERILE PLANTS, PLANTS OBTAINED BY THE PROCESS, AND USE OF THE PLANTS | | |

Transmittal
 Letter Submitting Documents for Completion of an Application
 Declaration
 Preliminary Amendment
 Statement Under 37 C.F.R. 1.821(f)
 Hard Copy of Sequence Listing
 Computer Readable Format (CRF) Sequence Listing (CD)
 Copy of Notice to File Missing Requirements



By stamping and returning to Harness, Dickey & Pierce, P.L.C.

USPTO Date Stamp

| | | |
|-----------------|-----------------------|-------------------|
| Due: 08/29/2006 | Attorney: DJD/GPB/ame | FILED: 08/29/2006 |
|-----------------|-----------------------|-------------------|

20

Brummett, Gregory P.

From: Corrigan, Anne-Marie [Anne-Marie.Corrigan@USPTO.GOV]
Sent: Friday, August 31, 2007 2:59 PM
To: Brummett, Gregory P.
Cc: Hunter, Lamont
Subject: RE: 10/574470

Mr. Brummett:

1) The Sequence Listing CD filed August 29, 2006, had been listed as an "artifact," and stored in artifact. It was retrieved, yesterday (8/30/07) and delivered to my building on the USPTO campus. I informed the PTO group which processes CRF's (computer readable forms) that I had a RUSH case; a group member picked up the CD, this morning. It was processed, and I annotated it: one error found.

2) The error in the processed CD was in Sequence 55 (see below).

```
<210> 55
<211> 6
<212> PRT
<213> Artificial Sequence
...
<220>
<223> Description of Artificial Sequence:Artificially
      Synthesized DNA Sequence
```

The above <223> explantion had one incorrect part: Sequence 55 is not a DNA sequence: it is an amino acid sequence. Thus, the correct response would be "Artificially Synthesized amino acid sequence." Checker would not note this error because when it spots a "<213> Artificial Sequence," it only checks for a <220> line and a <223> line. It cannot read the <223> response. That is why Checker did not flag this sequence as errored.

As for the following portion of your e-mail:

"It is also my understanding that the Notice of Defective Response dated July 30, 2007, which was based solely on the Sequence Listing filed on March 31, 2006, should be withdrawn in favor of a new Notice regarding any deficiencies noted in the listing provided August 29, 2006. If my understanding is incorrect or incomplete in any regard, please advise accordingly."

Since I do not work in the PCT DO/EO office, I cannot respond to your statements: only Mr. Hunter can do so.

Thank you,
Anne-Marie Corrigan

Anne-Marie Corrigan
STIC Systems Branch

Remsen 2B15
tele.: 571-272-2501
fax: 571-273-0221
anne-marie.corrigan@uspto.gov

-----Original Message-----

From: Brummett, Gregory P. [mailto:gbrummett@hdp.com]
Sent: Friday, August 31, 2007 2:29 PM
To: Corrigan, Anne-Marie
Cc: Hunter, Lamont
Subject: 10/574470

Ms. Corrigan,

Thank you for your assistance with this matter. I understand from our conversations that the Sequence Listing CD filed August 29, 2006, was located at the Office and has now been processed. It is also my understanding that the Notice of Defective Response dated July 30, 2007, which was based solely on the Sequence Listing filed on March 31, 2006, should be withdrawn in favor of a new Notice regarding any deficiencies noted in the listing provided August 29, 2006. If my understanding is incorrect or incomplete in any regard, please advise accordingly.

With respect to the August 29, 2006, Sequence Listing, it is also my understanding that one error was noted during the processing, specifically the mischaracterization in line <212> of the associated sequence. I have reviewed our copy of the August 29, 2006, Sequence Listing and was unable to identify any SEQ ID NO. that reflects this problem through manual review and application of Checker 4.4.0 and I remain, accordingly, perplexed by this new error. Is this a problem that Checker should flag? Please advise.

I believe in the next attempt I will utilize the EFS for filing the Sequence Listing and hopefully expedite the process.

Best regards,

Greg Brummett

Gregory P. Brummett
Harness, Dickey & Pierce, P.L.C.
11730 Plaza America Drive
Suite 600
Reston, Virginia 20190
T: (703) 668-8034
F: (703) 668-8200
gbrummett@hdp.com

| | | |
|------------|--|----------------------|
| 10/574,470 | Producing process of sterile plants plants obtained by the process and use of the plants | 06-30-2009::08:58:52 |
|------------|--|----------------------|

This application is officially maintained in electronic form. To View: Click the desired Document Description. To Download and Print: Check the desired document(s) and click PDF.

Bibliographic Data

| Mail Room Date | Document Code | Document Description | Document Category | Page Count |
|----------------|---------------|---|-------------------|------------|
| 05-18-2009 | IMIS | Miscellaneous Internal Document | PROSECUTION | 1 |
| 05-14-2009 | ABN | Abandonment | PROSECUTION | 2 |
| 11-13-2007 | TRAN.LET | Transmittal Letter | PROSECUTION | 5 |
| 11-13-2007 | IDS | Information Disclosure Statement (IDS) Filed (SB/08) | PROSECUTION | 1 |
| 11-13-2007 | NPL | NPL Documents | PRIOR ART | 2 |
| 11-13-2007 | NPL | NPL Documents | PRIOR ART | 8 |
| 09-04-2007 | SEQ.TXT | Sequence Listing (Text File) | PROSECUTION | 1 |
| 09-04-2007 | A.PE | Preliminary Amendment | PROSECUTION | 1 |
| 09-04-2007 | REM | Applicant Arguments/Remarks Made in an Amendment | PROSECUTION | 2 |
| 09-04-2007 | N417 | EFS Acknowledgment Receipt | PROSECUTION | 2 |
| 08-29-2007 | SEQ.TXT | Sequence Listing (Text File) | PROSECUTION | 1 |
| 09-22-2006 | IDS | Information Disclosure Statement (IDS) Filed (SB/08) | PROSECUTION | 7 |
| 09-22-2006 | NPL | NPL Documents | PRIOR ART | 34 |
| 09-22-2006 | FOR | Foreign Reference | PRIOR ART | 20 |
| 09-22-2006 | NPL | NPL Documents | PRIOR ART | 9 |
| 09-22-2006 | NPL | NPL Documents | PRIOR ART | 5 |
| 09-22-2006 | NPL | NPL Documents | PRIOR ART | 18 |
| 09-22-2006 | NPL | NPL Documents | PRIOR ART | 11 |
| 09-22-2006 | NPL | NPL Documents | PRIOR ART | 11 |
| 09-22-2006 | NPL | NPL Documents | PRIOR ART | 11 |
| 09-22-2006 | NPL | NPL Documents | PRIOR ART | 13 |
| 09-22-2006 | NPL | NPL Documents | PRIOR ART | 11 |
| 09-22-2006 | NPL | NPL Documents | PRIOR ART | 5 |
| 09-22-2006 | NPL | NPL Documents | PRIOR ART | 16 |
| 09-22-2006 | NPL | NPL Documents | PRIOR ART | 1 |
| 09-22-2006 | NPL | NPL Documents | PRIOR ART | 4 |
| 09-22-2006 | NPL | NPL Documents | PRIOR ART | 10 |
| 09-22-2006 | NPL | NPL Documents | PRIOR ART | 22 |
| 09-22-2006 | NPL | NPL Documents | PRIOR ART | 16 |
| 09-22-2006 | NPL | NPL Documents | PRIOR ART | 6 |
| 09-22-2006 | NPL | NPL Documents | PRIOR ART | 6 |
| 09-22-2006 | NPL | NPL Documents | PRIOR ART | 10 |
| 09-22-2006 | NPL | NPL Documents | PRIOR ART | 10 |
| 08-29-2006 | PEFR | Applicant Response to Pre-Exam Formalities Notice | PROSECUTION | 6 |
| 08-29-2006 | OATH | Oath or Declaration filed | PROSECUTION | 3 |
| 08-29-2006 | A.PE | Preliminary Amendment | PROSECUTION | 1 |
| 08-29-2006 | REM | Applicant Arguments/Remarks Made in an Amendment | PROSECUTION | 2 |
| 08-29-2006 | SEQLIST | Sequence Listing | PROSECUTION | 40 |
| 08-29-2006 | CRFD | Computer Readable Form (CRF) for Sequence Listing - Defective | PROSECUTION | 3 |
| 08-29-2006 | ARTIFACT | Artifact sheet indicating an item has been | PROSECUTION | 1 |

| | | | | |
|------------|----------|---|-------------|-----|
| | | filed which cannot be scanned | | |
| 08-29-2006 | IMIS | Miscellaneous Internal Document | PROSECUTION | 1 |
| 08-29-2006 | PEFN | Pre-Exam Formalities Notice | PROSECUTION | 2 |
| 07-05-2006 | M905 | Notice of DO/EO Missing Requirements Mailed | PROSECUTION | 2 |
| 04-17-2006 | CRFD | Computer Readable Form (CRF) for Sequence Listing - Defective | PROSECUTION | 3 |
| 03-31-2006 | TRNA | Transmittal of New Application | PROSECUTION | 4 |
| 03-31-2006 | SPEC | Specification | PROSECUTION | 93 |
| 03-31-2006 | CLM | Claims | PROSECUTION | 12 |
| 03-31-2006 | ABST | Abstract | PROSECUTION | 1 |
| 03-31-2006 | DRW | Drawings-only black and white line drawings | PROSECUTION | 14 |
| 03-31-2006 | WFEE | Fee Worksheet (PTO-875) | PROSECUTION | 1 |
| 03-31-2006 | SEQLIST | Sequence Listing | PROSECUTION | 52 |
| 03-31-2006 | A.PE | Preliminary Amendment | PROSECUTION | 2 |
| 03-31-2006 | CLM | Claims | PROSECUTION | 10 |
| 03-31-2006 | REM | Applicant Arguments/Remarks Made in an Amendment | PROSECUTION | 2 |
| 03-31-2006 | IDS | Information Disclosure Statement (IDS) Filed (SB/08) | PROSECUTION | 4 |
| 03-31-2006 | FOR | Foreign Reference | PRIOR ART | 138 |
| 03-31-2006 | FOR | Foreign Reference | PRIOR ART | 454 |
| 03-31-2006 | NPL | NPL Documents | PRIOR ART | 7 |
| 03-31-2006 | NPL | NPL Documents | PRIOR ART | 11 |
| 03-31-2006 | NPL | NPL Documents | PRIOR ART | 6 |
| 03-31-2006 | 371P | Documents submitted with 371 Applications | PROSECUTION | 1 |
| 03-31-2006 | 371P | Documents submitted with 371 Applications | PROSECUTION | 6 |
| 03-31-2006 | 371P | Documents submitted with 371 Applications | PROSECUTION | 4 |
| 03-31-2006 | 371P | Documents submitted with 371 Applications | PROSECUTION | 1 |
| 03-31-2006 | 371P | Documents submitted with 371 Applications | PROSECUTION | 97 |
| 03-31-2006 | 371P | Documents submitted with 371 Applications | PROSECUTION | 5 |
| 03-31-2006 | 371P | Documents submitted with 371 Applications | PROSECUTION | 96 |
| 03-31-2006 | 371P | Documents submitted with 371 Applications | PROSECUTION | 1 |
| 03-31-2006 | FRPR | Certified Copy of Foreign Priority Application | PROSECUTION | 69 |
| 03-31-2006 | FRPR | Certified Copy of Foreign Priority Application | PROSECUTION | 82 |
| 03-31-2006 | FRPR | Certified Copy of Foreign Priority Application | PROSECUTION | 80 |
| 03-31-2006 | FRPR | Certified Copy of Foreign Priority Application | PROSECUTION | 79 |
| 03-31-2006 | IMIS | Miscellaneous Internal Document | PROSECUTION | 1 |
| 03-31-2006 | WFEE | Fee Worksheet (PTO-875) | PROSECUTION | 1 |
| 03-31-2006 | WCLM | Claims Worksheet (PTO-2022) | PROSECUTION | 1 |
| 03-31-2006 | P.409.IN | IPEA/409 - Int'l Prelim Report on Patentability | PROSECUTION | 5 |

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National Institute of Advanced Industrial Science and Technology

<120> Producing process of plants with sterility, plants produced by the process,
and use thereof

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<150> JP 2004-2192
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<210> 88
<211> 36
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<213> Artificial Sequence

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<220>
<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 88
cttgatctgg atctagaact ccgtttgggt ttcgct 36

<210> 89
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<212> DNA
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<220>
<223> Description of Artificial Sequence:Artificially
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agcgaaaccc aaacggagtt ctagatccag atcaag 36

<210> 90
<211> 615
<212> DNA
<213> Arabidopsis thaliana

<400> 90
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ccatggagct atggagattt tgataattgc caacaggatc atgattatct tcttagggttt 120
tcatggccac caagatccct cacttgcagc ttctgcaaaa gggaaattcag atcggctcaa 180
gcacttggtg gccacatgaa tggcacaga agagacagag caagactcag attacaacag 240
tctccatcat catcttcaac accttctcct ccttaccctt accctaatta ctcttaactca 300
accatggcaa actctcctcc tcctcatcat tctcctctaa ccctatttcc aaccctttct 360
cctccatcct caccatgata tagggcaggt ttgatccgtt ccttgcggcc caagtcaaaa 420
catacaccag aaaacgcctt taagactaag aaatcatctc ttttagtggg ggctggagag 480
gctacaaggt tcaccatgaa agatgttgc aagatcctga ggaatgtgaa aatcatcagc 540
ttggagcttggatctt gattaacgaa tcagagcaag atctggatct agaactccgt 600
ttgggtttcg cttaa 615

<210> 91
<211> 93
<212> DNA
<213> Arabidopsis thaliana

<400> 91
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ctggatcttag aactccgttt gggtttcgct taa 93

<210> 92
<211> 18
<212> DNA
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<220>
<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 92
gatctaaacc tccgtctg 18

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<210> 93
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<220>
<223> Description of Artificial Sequence:Artificially
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<400> 93
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<210> 94
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<210> 95
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<210> 96
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<210> 97
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<210> 99
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caaacggagt cgttagatc

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caaacggagt tctagctc

<210> 102
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Synthesized DNA Sequence

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| <400> 102 aacctagaac tccgttg | 18 |
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| <210> 103 <211> 18 <212> DNA <213> Artificial Sequence | |
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| <400> 103 caaacggagt tctaggtt | 18 |
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| <210> 104 <211> 18 <212> DNA <213> Artificial Sequence | |
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| <400> 104 cagctagaac tccgttg | 18 |
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| <210> 105 <211> 18 <212> DNA <213> Artificial Sequence | |
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| | |
| <400> 105 caaacggagt tctagctg | 18 |
| | |
| <210> 106 <211> 18 <212> DNA <213> Artificial Sequence | |
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| | |
| <400> 106 gatctagaac tcaacttg | 18 |
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| <210> 107 <211> 18 <212> DNA <213> Artificial Sequence | |
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| <220> | |

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<210> 108
<211> 18
<212> DNA
<213> Artificial Sequence

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<210> 109
<211> 18
<212> DNA
<213> Artificial Sequence

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<223> Description of Artificial Sequence:Artificially
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<400> 109
caactggagt tcttagatc 18

<210> 110
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 110
acgcttgaat taagactc 18

<210> 111
<211> 18
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<220>
<223> Description of Artificial Sequence:Artificially
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<400> 111
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<210> 112
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<213> Artificial Sequence

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<220>
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<400> 112
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<210> 113
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
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<400> 113
gagcgtaat tcaagatc 18

<210> 114
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 114
agccttgaat taagactc 18

<210> 115
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 115
gagtcttaat tcaaggct 18

<210> 116
<211> 18
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<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
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<400> 116
gatcttgaat taaggctc 18

<210> 117
<211> 18

<212> DNA
<213> Artificial Sequence

<220>
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<400> 117
gaggcttaat tcaagatc

18

<210> 118
<211> 18
<212> DNA
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<400> 118
gatcttacct taagactc

18

<210> 119
<211> 18
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<220>
<223> Description of Artificial Sequence:Artificially
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<400> 119
gagtcttaag gtaagatc

18

<210> 120
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<212> DNA
<213> Artificial Sequence

<220>
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18

<210> 121
<211> 18
<212> DNA
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<220>
<223> Description of Artificial Sequence:Artificially
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<400> 121
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18

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<211> 18
<212> DNA
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<220>
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<400> 122
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18

<210> 123
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<212> DNA
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<220>
<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

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18

<210> 124
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
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Synthesized DNA Sequence

<400> 124
gatctcgaaat ttctgtctc

18

<210> 125
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 125
gagacgaaat tcgagatc

18

<210> 126
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 126
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18

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<210> 127
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
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<400> 127
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<210> 128
<211> 18
<212> DNA
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<220>
<223> Description of Artificial Sequence:Artificially
Synthesized Primer Sequence

<400> 128
tcgcattgtatc tacaccctg 18

<210> 129
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 129
cagggttaga tcaaggcga 18

<210> 130
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
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Synthesized DNA Sequence

<400> 130
gatcttacgc taaagctg 18

<210> 131
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 131
cagctttagc gtaagatc

18

<210> 132
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 132
gatcttagcc taaagctg

18

<210> 133
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 133
cagctttagg ctaagatc

18

<210> 134
<211> 232
<212> PRT
<213> Arabidopsis thaliana

<400> 134
Met Ala Arg Gly Lys Ile Gln Ile Lys Arg Ile Glu Asn Gln Thr Asn
1 5 10 15
Arg Gln Val Thr Tyr Ser Lys Arg Arg Asn Gly Leu Phe Lys Lys Ala
20 25 30
His Glu Leu Thr Val Leu Cys Asp Ala Arg Val Ser Ile Ile Met Phe
35 40 45
Ser Ser Ser Asn Lys Leu His Glu Tyr Ile Ser Pro Asn Thr Thr Thr
50 55 60
Lys Glu Ile Val Asp Leu Tyr Gln Thr Ile Ser Asp Val Asp Val Trp
65 70 75 80
Ala Thr Gln Tyr Glu Arg Met Gln Glu Thr Lys Arg Lys Leu Leu Glu
85 90 95
Thr Asn Arg Asn Leu Arg Thr Gln Ile Lys Gln Arg Leu Gly Glu Cys
100 105 110
Leu Asp Glu Leu Asp Ile Gln Glu Leu Arg Arg Leu Glu Asp Glu Met
115 120 125
Glu Asn Thr Phe Lys Leu Val Arg Glu Arg Lys Phe Lys Ser Leu Gly
130 135 140
Asn Gln Ile Glu Thr Thr Lys Lys Asn Lys Ser Gln Gln Asp Ile
145 150 155 160
Gln Lys Asn Leu Ile His Glu Leu Glu Leu Arg Ala Glu Asp Pro His
165 170 175
Tyr Gly Leu Val Asp Asn Gly Gly Asp Tyr Asp Ser Val Leu Gly Tyr
180 185 190
Gln Ile Glu Gly Ser Arg Ala Tyr Ala Leu Arg Phe His Gln Asn His
195 200 205
His His Tyr Tyr Pro Asn His Gly Leu His Ala Pro Ser Ala Ser Asp

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| | | |
|-------------------------|---------|-----|
| 210 | 215 | 220 |
| Ile Ile Thr Phe His Leu | Leu Glu | |
| 225 | 230 | |

<210> 135
<211> 699
<212> DNA
<213> Arabidopsis thaliana

<400> 135

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| atggcgagag | ggaagatcca | gatcaagagg | atagagaacc | agacaaacag | acaagtgcg | 60 |
| tattcaaaga | gaagaaatgg | tttattcaag | aaagcacatg | agctcaggt | tttgtgtat | 120 |
| gctagggtt | cgattatcat | gttcctctagc | tccacaacgc | ttcatgagta | tatcagccct | 180 |
| aacaccacaa | cgaaggagat | cgttagatctg | taccaaacta | tttctgtatgt | cgatgtttgg | 240 |
| gccactcaat | atgagcgaat | gcaagaaaacc | aagaggaaac | tgttggagac | aatagaaaat | 300 |
| ctccggactc | agatcaagca | gaggcttagt | gagtgttgg | acgagcttga | cattcaggag | 360 |
| ctgcgtcgtc | ttgaggatga | aatggaaaac | actttcaac | tcgttcgcga | gchgcaagttc | 420 |
| aaatctttg | ggaatcgat | cgagaccacc | aagaaaaaga | acaaaagtca | acaagacata | 480 |
| caaagaatc | tcatacatga | gctggacta | agagctgaag | atcctacta | tggacttagta | 540 |
| gacaatggag | gagattcaga | ctcagttctt | ggataccaaa | tcgaagggtc | acgtgcttac | 600 |
| gctcttcgtt | tccaccagaa | ccatcaccac | tattacccaa | accatggcct | tcatgcaccc | 660 |
| tctgcctctg | acatcattac | cttccatctt | cttgataaa | | | 699 |

<210> 136
<211> 365
<212> PRT
<213> Arabidopsis thaliana

<400> 136

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Met | Ser | Lys | Ser | Met | Ser | Ile | Ser | Val | Asn | Gly | Gln | Ser | Gln | Val |
| 1 | | | | | 5 | | | | 10 | | | | 15 | | |
| Pro | Pro | Gly | Phe | Arg | Phe | His | Pro | Thr | Glu | Glu | Glu | Leu | Leu | Gln | Tyr |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Tyr | Leu | Arg | Lys | Lys | Val | Asn | Ser | Ile | Glu | Ile | Asp | Leu | Asp | Val | Ile |
| | 35 | | | | | 40 | | | | | 45 | | | | |
| Arg | Asp | Val | Asp | Leu | Asn | Lys | Leu | Glu | Pro | Trp | Asp | Ile | Gln | Glu | Met |
| | | 50 | | | | 55 | | | | 60 | | | | | |
| Cys | Lys | Ile | Gly | Thr | Thr | Pro | Gln | Asn | Asp | Trp | Tyr | Phe | Phe | Ser | His |
| | 65 | | | | 70 | | | | 75 | | 80 | | | | |
| Lys | Asp | Lys | Lys | Tyr | Pro | Thr | Gly | Thr | Arg | Thr | Asn | Arg | Ala | Thr | Ala |
| | | | | 85 | | | | 90 | | | 95 | | | | |
| Ala | Gly | Phe | Trp | Lys | Ala | Thr | Gly | Arg | Asp | Lys | Ile | Ile | Tyr | Ser | Asn |
| | | | 100 | | | 105 | | | | | 110 | | | | |
| Gly | Arg | Arg | Ile | Gly | Met | Arg | Lys | Thr | Leu | Val | Phe | Tyr | Lys | Gly | Arg |
| | | | 115 | | | 120 | | | | 125 | | | | | |
| Ala | Pro | His | Gly | Gln | Lys | Ser | Asp | Trp | Ile | Met | His | Glu | Tyr | Arg | Leu |
| | | | 130 | | | 135 | | | | 140 | | | | | |
| Asp | Asp | Asn | Ile | Ile | Ser | Pro | Glu | Asp | Val | Thr | Val | His | Glu | Val | Val |
| | | | 145 | | | 150 | | | 155 | | | 160 | | | |
| Ser | Ile | Ile | Gly | Glu | Ala | Ser | Gln | Asp | Glu | Gly | Trp | Val | Val | Cys | Arg |
| | | | 165 | | | | 170 | | | | 175 | | | | |

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| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Phe | Lys | Lys | Asn | Leu | His | Lys | Thr | Leu | Asn | Ser | Pro | Val | Gly | |
| 180 | | | | | | | 185 | | | | | | 190 | | |
| Gly | Ala | Ser | Leu | Ser | Gly | Gly | Gly | Asp | Thr | Pro | Lys | Thr | Thr | Ser | Ser |
| 195 | | | | | 200 | | | | | | 205 | | | | |
| Gln | Ile | Phe | Asn | Glu | Asp | Thr | Leu | Asp | Gln | Phe | Leu | Glu | Leu | Met | Gly |
| 210 | | | | | | 215 | | | | | 220 | | | | |
| Arg | Ser | Cys | Lys | Glu | Glu | Leu | Asn | Leu | Asp | Pro | Phe | Met | Lys | Leu | Pro |
| 225 | | | | | 230 | | | | | 235 | | | 240 | | |
| Asn | Leu | Glu | Ser | Pro | Asn | Ser | Gln | Ala | Ile | Asn | Asn | Cys | His | Val | Ser |
| 245 | | | | | | 250 | | | | | | 255 | | | |
| Ser | Pro | Asp | Thr | Asn | His | Asn | Ile | His | Val | Ser | Asn | Val | Val | Asp | Thr |
| 260 | | | | | | 265 | | | | | | 270 | | | |
| Ser | Phe | Val | Thr | Ser | Trp | Ala | Ala | Leu | Asp | Arg | Leu | Val | Ala | Ser | Gln |
| 275 | | | | | | 280 | | | | | | 285 | | | |
| Leu | Asn | Gly | Pro | Thr | Ser | Tyr | Ser | Ile | Thr | Ala | Val | Asn | Glu | Ser | His |
| 290 | | | | | | 295 | | | | | 300 | | | | |
| Val | Gly | His | Asp | His | Leu | Ala | Leu | Pro | Ser | Val | Arg | Ser | Pro | Tyr | Pro |
| 305 | | | | | | 310 | | | | | 315 | | | 320 | |
| Ser | Leu | Asn | Arg | Ser | Ala | Ser | Tyr | His | Ala | Gly | Leu | Thr | Gln | Glu | Tyr |
| 325 | | | | | | 330 | | | | | | 335 | | | |
| Thr | Pro | Glu | Met | Glu | Leu | Trp | Asn | Thr | Thr | Ser | Ser | Leu | Ser | Ser | |
| 340 | | | | | | 345 | | | | | | 350 | | | |
| Ser | Pro | Gly | Pro | Phe | Cys | His | Val | Ser | Asn | Gly | Ser | Gly | | | |
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<210> 137

<211> 1098

<212> DNA

<213> Arabidopsis thaliana

<400> 137

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| atgatgtcaa | aatcttatgag | catacagtg | aacggacaat | ctcaagtgcc | tcctgggttt | 60 |
| aggtttcattc | cgaccgagga | agagctgttgc | cagtattatc | tccgaaagaa | agttaatagc | 120 |
| atcgagatcg | atcttgatgt | cattcgcac | gttgatctca | acaagctcg | gccttgggac | 180 |
| attcaagaga | tgtgtaaaat | aggaacaacg | ccacaaaacg | actggatattt | ctttagccac | 240 |
| aaggacaaaa | aatatccgac | gggaacgaga | actaacagag | ccactgcggc | tggattttgg | 300 |
| aaagcaactg | gccgcgacaaa | gatcatatat | agcaatggcc | gtagaatttg | gatgagaaaag | 360 |
| actcttgttt | tctacaaagg | ccgagctcct | cacggccaaa | aatctgtattt | gatcatgcatt | 420 |
| aatatagac | tcgatgacaa | cattatttcc | cccggaggat | tcaccgttca | tgagggtcg | 480 |
| agtattatag | gggaagacatc | acaagacgaa | ggatgggtgg | tgtgtcgat | tttcaagaag | 540 |
| aagaatcttc | acaaaacctt | aaacagtccc | gtcggaggag | cttccctgag | cggcggcgga | 600 |
| gatacggcga | agacgacatc | atctcagatc | ttcaacgagg | atactctcg | ccaatttctt | 660 |
| gaacttatgg | ggagatcttg | taaagaagag | ctaaatcttg | accctttcat | gaaactcccc | 720 |
| aacctcgaaa | gccctaacag | tcaggcaatc | aacaactgccc | acgtaagctc | tcccgcacact | 780 |
| aatcataata | tccacgtcag | caacgtggtc | gacactagct | ttgttacttag | ctgggcggct | 840 |
| ttagaccgc | tcgtggcctc | gcagcttaac | ggaccacat | catattcaat | tacagccgtc | 900 |
| aatgagagcc | acgtgggcca | tgatccatctc | gctttgcctt | ccgtccgatc | tccgtacccc | 960 |
| agcctaaacc | ggtcccgcttc | gtaccacgccc | ggttaaacac | aggaatatac | accggagatg | 1020 |
| gagctatgga | atacgacgac | gtcgctctca | tcgtcatcg | ctggcccatt | ttgtcacgt | 1080 |
| tcgaatggta | gtggataa | | | | | 1098 |

<210> 138
<211> 367
<212> PRT
<213> Arabidopsis thaliana

<400> 138
Met Gly His His Ser Cys Cys Asn Lys Gln Lys Val Lys Arg Gly Leu
1 5 10 15
Trp Ser Pro Glu Glu Asp Glu Lys Leu Ile Asn Tyr Ile Asn Ser Tyr
20 25 30
Gly His Gly Cys Trp Ser Ser Val Pro Lys His Ala Gly Thr Tyr Thr
35 40 45
His Ile His Gly Phe Cys Leu Gln Arg Cys Gly Lys Ser Cys Arg Leu
50 55 60
Arg Trp Ile Asn Tyr Leu Arg Pro Asp Leu Lys Arg Gly Ser Phe Ser
65 70 75 80
Pro Gln Glu Ala Ala Leu Ile Ile Glu Leu His Ser Ile Leu Gly Asn
85 90 95
Arg Trp Ala Gln Ile Ala Lys His Leu Pro Gly Arg Thr Asp Asn Glu
100 105 110
Val Lys Asn Phe Trp Asn Ser Ser Ile Lys Lys Lys Leu Met Ser His
115 120 125
His His His Gly His His His His Leu Ser Ser Met Ala Ser Leu
130 135 140
Leu Thr Asn Leu Pro Tyr His Asn Gly Phe Asn Pro Thr Thr Val Asp
145 150 155 160
Asp Glu Ser Ser Arg Phe Met Ser Asn Ile Ile Thr Asn Thr Asn Pro
165 170 175
Asn Phe Ile Thr Pro Ser His Leu Ser Leu Pro Ser Pro His Val Met
180 185 190
Thr Pro Leu Met Phe Pro Thr Ser Arg Glu Gly Asp Phe Lys Phe Leu
195 200 205
Thr Thr Asn Asn Pro Asn Gln Ser His His His Asp Asn Asn His Tyr
210 215 220
Asn Asn Leu Asp Ile Leu Ser Pro Thr Pro Thr Ile Asn Asn His His
225 230 235 240
Gln Pro Ser Leu Ser Ser Cys Pro His Asp Asn Asn Leu Gln Trp Pro
245 250 255
Ala Leu Pro Asp Phe Pro Ala Ser Thr Ile Ser Gly Phe Gln Glu Thr
260 265 270
Leu Gln Asp Tyr Asp Asp Ala Asn Lys Leu Asn Val Phe Val Thr Pro
275 280 285
Phe Asn Asp Asn Ala Lys Lys Leu Leu Cys Gly Glu Val Leu Glu Gly

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290

295

300

Lys Val Leu Ser Ser Ser Pro Ile Ser Gln Asp His Gly Leu Phe
 305 310 315 320

Leu Pro Thr Thr Tyr Asn Phe Gln Met Thr Ser Thr Ser Asp His Gln
 325 330 335

His His His Arg Val Asp Ser Tyr Ile Asn His Met Ile Ile Pro Ser
 340 345 350

Ser Ser Ser Ser Pro Ile Ser Cys Gly Gln Tyr Val Ile Thr
 355 360 365

<210> 139
 <211> 1104
 <212> DNA
 <213> Arabidopsis thaliana

<400> 139

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| gaagacgaaa | agctcatcaa | ctacatcaat | tcatatggcc | atggatgttg | gagctctgtt | 120 |
| cctaaacatg | caggcactt | tacacatata | catgggtttt | gttgtcagag | atgtggaaag | 180 |
| agtttagat | taagatggat | aaattatcta | agacctgatc | ttaaacgtgg | aagcttctct | 240 |
| cctcaagaag | ctgctcttat | cattgagctt | cacagcattc | tttgtaacag | atgggctcaa | 300 |
| attgcttaaac | atctacctgg | aagaacagat | aacgaggtca | agaatttctg | gaactcgagc | 360 |
| attaaaaaga | agctcatgtc | tcaccatcat | cacggtcattc | atcatcatca | tctctttcc | 420 |
| atggcgagtt | tgctcacaaa | ccttccttat | cacaatggat | tcaaccctac | tacagtgcac | 480 |
| gatgaaagtt | caagattcat | gtccaaatatc | atcacaaaca | ctaacccctaa | tttcatcact | 540 |
| ccaaggccatc | tctcttttcc | ttcttcctcat | gttatgaccc | cattgtatgtt | cccaacctct | 600 |
| agagaaggag | atttcaagtt | tctaaccaca | aacaacccaa | accaatctca | tcaccatgtat | 660 |
| aataaccatt | acaacaacct | cgacattttg | tcacccacac | caactataaa | caatcatcat | 720 |
| caacccatc | tttcttcttg | tcctctatgtat | aataatctcc | aatggccagc | gttaccagat | 780 |
| ttcccagcga | gtaccatttc | tggtttccaa | gaaaccccttc | aagattatga | tgatgctaat | 840 |
| aaactcaacg | tgttgtgac | accattcaac | gataatgcca | aaaagttatt | atgtggagaa | 900 |
| gttctcgaag | gcaaaagtact | atcttcctcc | tcaccaattt | cacaagatca | cggccttttt | 960 |
| cttccacca | cgtacaactt | tcaaattact | tctacgagtg | atcatcaaca | tcatcatcga | 1020 |
| gtggactcat | acatcaatca | catgatcata | ccatcatcat | cctcatcgtc | gccaatctct | 1080 |
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 <213> Arabidopsis thaliana

<400> 140

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| Met | Thr | Ala | Tyr | Gln | Ser | Glu | Leu | Gly | Gly | Asp | Ser | Ser | Pro | Leu | Arg |
| 1 | | | | 5 | | | 10 | | | | 15 | | | | |
| Lys | Ser | Gly | Arg | Gly | Lys | Ile | Glu | Ile | Lys | Arg | Ile | Glu | Asn | Thr | Thr |
| | | | | | 20 | | | 25 | | | | 30 | | | |
| Asn | Arg | Gln | Val | Thr | Phe | Cys | Lys | Arg | Arg | Asn | Gly | Leu | Leu | Lys | Lys |
| | | | | | | | 35 | | 40 | | | 45 | | | |
| Ala | Tyr | Glu | Leu | Ser | Val | Leu | Cys | Asp | Ala | Glu | Val | Ala | Leu | Ile | Val |
| | | | | | 50 | | 55 | | | 60 | | | | | |
| Phe | Ser | Ser | Arg | Gly | Arg | Leu | Tyr | Glu | Tyr | Ser | Asn | Asn | Ser | Val | Lys |
| | | | | | 65 | | 70 | | | 75 | | | | | 80 |

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Gly Thr Ile Glu Arg Tyr Lys Ala Ile Ser Asp Asn Ser Asn Thr
 85 90 95
 Gly Ser Val Ala Glu Ile Asn Ala Gln Tyr Tyr Gln Gln Glu Ser Ala
 100 105 110
 Lys Leu Arg Gln Gln Ile Ile Ser Ile Gln Asn Ser Asn Arg Gln Leu
 115 120 125
 Met Gly Glu Thr Ile Gly Ser Met Ser Pro Lys Glu Leu Arg Asn Leu
 130 135 140
 Glu Gly Arg Leu Glu Arg Ser Ile Thr Arg Ile Arg Ser Lys Lys Asn
 145 150 155 160
 Glu Leu Leu Phe Ser Glu Ile Asp Tyr Met Gln Lys Arg Glu Val Asp
 165 170 175
 Leu His Asn Asp Asn Gln Ile Leu Arg Ala Lys Ile Ala Glu Asn Glu
 180 185 190
 Arg Asn Asn Pro Ser Ile Ser Leu Met Pro Gly Gly Ser Asn Tyr Glu
 195 200 205
 Gln Leu Met Pro Pro Pro Gln Thr Gln Ser Gln Pro Phe Asp Ser Arg
 210 215 220
 Asn Tyr Phe Gln Val Ala Ala Leu Gln Pro Asn Asn His His Tyr Ser
 225 230 235 240
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<213> *Arabidopsis thaliana*

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cgtagaaat

gcactcatc

gggactatt

gaaat~~t~~aat
ataaaaaa

atacaaaaac
staaaaaac

ctcaggAAC
GAGCTGTTA

gagctctta
aaccaggatt

aaccagatt
atcccaaaa

atgcggagga
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tttggattccat
tccggccaaat

ccccgggg

<210> 142

<211> 25

<212> DNA

<213> Art

<220>

<223> De

Syn

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| <400> 143 gatccaggaa gcttaattgg ttccggcgcc | 30 |
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| <210> 145 <211> 31 <212> DNA <213> Artificial Sequence | |
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aattgtggat cct 73

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<210> 149
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<212> PRT
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